



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
OREGON OPERATIONS OFFICE
811 S.W. 6th Avenue
Portland, Oregon 97204

September 20, 2007

Mr. Jim McKenna
Port of Portland & Co-Chairman, Lower Willamette Group
121 NW Everett
Portland, Oregon 97209

Mr. Robert Wyatt
Northwest Natural & Co-Chairman, Lower Willamette Group
220 Northwest Second Avenue
Portland, Oregon 97209

Re: Portland Harbor Superfund Site; Administrative Order on Consent for Remedial Investigation and Feasibility Study; Docket No. CERCLA-10-2001-0240. Round 3 Groundwater Pathway Assessment: Field Sampling Plan for Stratigraphic Coring and Bulk Sediment – Gunderson

Dear Messrs. Wyatt and McKenna:

EPA has completed its review of the Round 3 Groundwater Pathway Assessment: Field Sampling Plan for Stratigraphic Coring and Bulk Sediment – Gunderson (Gunderson Groundwater FSP). This document was prepared by Integral Consulting on behalf of the Lower Willamette Group (LWG) and was received on August 17, 2007.

General Comments:

EPA does not agree with the proposal to install stratigraphic cores along one transect extending from the groundwater contaminant plume. EPA believes that a total of 3 transects are necessary to get more lateral coverage. Without an understanding of the flow path from the site, the selection of boring locations along X-X' is too narrow to ensure adequate spatial coverage. Figure 4-1 depicts additional borings offset from the transect. This represents a better approach to assure that we do follow the formation if it is in the area. In general, EPA recommends increased sampling density in the near shore area closer to the facility with lower coverage further downstream; EPA does not believe that it is necessary to install borings all the way to the Portland Shipyard on the other side of the river.

EPA does not agree with the proposed approach with attempts to evaluate whether a complete contaminant transport pathways exists based on stratigraphic information and surface sediment

grab samples alone. EPA believes that groundwater and/or transition zone water data are needed to evaluate the deep groundwater contaminant migration pathway at the Gunderson site. Estimating water concentrations based on bulk sediment concentrations and partition factors may not be an accurate approach for chlorinated solvents and their breakdown products due to uncertainties in partition factors and sampling handling procedures. EPA recommends collecting groundwater (i.e., deep transition water) samples.

EPA believes that a combined coring program and groundwater sampling program can determine whether a complete contaminant migration pathway exists in one field effort. Even if the results are inconclusive, sufficient data will be available for a focused follow-up phase. Previously, other parties (Siltronic & Arkema) have utilized quick turn-around lab efforts to inform the field program & allow for scope modifications to address contaminant distribution, fate & transport questions.

Specific Comments:

Section 3.0 – Sampling Objectives: EPA does not agree with the statement: “Understanding the projection of this zone beyond the immediate area offshore of the Gunderson Area 1 (i.e., upstream and downstream) is not an objective of this investigation or of the RI.” EPA believes that the sample collection program should be sufficiently broad to characterize groundwater contaminants in the deep sand and gravel zone offshore of the Gunderson facility in the vicinity of the known upland chlorinated solvent groundwater plume. In addition, an estimate of chemical flux to the Willamette River should be included as a sampling objective.

Section 4.0 – Sampling Approach: To meet the data collection objectives of the Gunderson Groundwater FSP, EPA recommends modifying the sampling approach as follows:

- An additional cross section (Z-Z') that bisects the angle between X-X' and the downstream shoreline should be projected offshore. The angle between X-X' & Y-Y' increased for additional spatial coverage;
- Three arcs centered on X-X' should be drawn to connect points on X-X', Y-Y', and Z-Z' located approximately 750 feet, 1250 and 1750 feet offshore of Gunderson;
- Stratigraphic cores should be installed at each of the six points on X-X', Y-Y', & Z-Z';
- Stratigraphic cores should be examined and 2- 3 intervals from each location selected for the collection of bulk sediment samples with follow-up collection of TZW samples using GeoProbe or similar techniques that allow for the collection of groundwater grab samples.

EPA believes that this approach will determine 1) whether & at what depths the sand/gravel occurs offshore, and 2) provide data to assess the concentrations of VOCs, if any, in TZW, bulk sediment.

Section 4.1 – Stratigraphic Coring: The last paragraph of this section should state a decision regarding the bulk sediment and TZW sampling intervals to be selected for chemical analysis will take place following consultation with EPA.

Section 4.2 – Surface Sediment Sampling: While the coring program does not preclude the collection of surface grab samples, the stratigraphic core program should ensure that the relevant stratigraphic units are identified and collected for chemical analysis.

Section 4.3 – Chemicals of Interest: Bulk sediment and TZW samples should be analyzed for all volatile organic compounds (VOCs) to allow the assessment of contaminant degradation.

Section 7.0 – Standard Operating Procedures: Standard Operating Procedures (SOPs) should be developed for the collection of TZW grab samples using the GeoProbe device or similar collection device. Sample labeling procedures should allow for the designation of TZW grab samples.

Due to schedule constraints, EPA requests a meeting within two weeks to reach agreement on the objectives and scope of the groundwater pathway assessment offshore of the Gunderson site. EPA feels strongly that additional lateral control and the collection of TZW grab samples are necessary for this evaluation.

If you have any questions, please contact Chip Humphrey at (503) 326-2678 or Eric Blischke (503) 326-4006. All legal inquiries should be directed to Lori Cora at (206) 553-1115.

Sincerely,

Chip Humphrey
Eric Blischke
Remedial Project Managers

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